

November 10, 2011

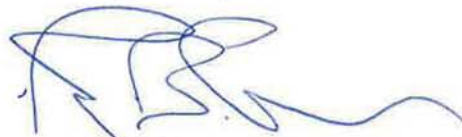
Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: Fourth Further Notice of Proposed Rulemaking (WT Dkt. No. 06-150;  
PS Dkt. No. 06-229; WP Dkt. No. 07-100)

Dear Ms. Dortch:

On November 10, 2011, Robert Peirce, Chief Alliance Officer of National LambdaRail, Inc. ("NLR"), Kurt Snodgrass, Chief Operating Officer of NLR, and the undersigned, counsel for NLR, met with Jennifer Manner, Robert Pavlak, Gene Fullano, Rasoul Safavian and Pat Amodio of the Commission to discuss the letter of NLR dated October 7, 2011 that was filed in the above-referenced matters. In addition, NLR distributed and the parties discussed the attached document entitled "National LambdaRail: The Backbone Component of a Nationwide, Broadband, Interoperable Public Safety Network."

Respectfully submitted,



Randall B. Lowe  
Attorney for National LambdaRail, Inc.

cc: Jennifer Manner  
Robert Pavlak  
Gene Fullano  
Rasoul Safavian  
Pat Amodio



## **NATIONAL LAMBDA RAIL: THE BACKBONE COMPONENT OF A NATIONWIDE, BROADBAND, INTEROPERABLE PUBLIC SAFETY NETWORK**

On October 7, 2011, National LambdaRail (“NLR”), a non-profit organization, filed *ex parte* comments before the Commission on its Fourth Further Notice of Proposed Rulemaking regarding the establishment of a nationwide, broadband, interoperable public safety network. NLR offered itself as the backbone component of such a network and, in doing so, commented that: (i) connectivity through a common backbone is preferable to a patchwork of direct, one-to-one connections; (ii) one backbone network is preferable to multiple backbones; (iii) it may be more practical to connect to a backbone via local or regional networks; (iv) a clearinghouse is only necessary in the event of multiple backbones; (v) the public Internet should only be used, if at all, as a redundant network because it can be fragile and insecure; and (vi) it is not necessary to require a dedicated, stand alone backbone but, instead, it is adequate to use dedicated circuits or discreet channels on an existing backbone. NLR closed its comments by noting that not only does NLR own, operate and maintain its network (see Figure 1), but that it is connected to 14 regional networks (“RONs”), which permit access to NLR’s network throughout the country (see Table 1), that NLR’s network is easily accessible by other RONs (see Table 1) and that the public safety agencies can connect to NLR either via the RONs or directly. NLR concluded, therefore, that its “network is perfectly suited for what the Commission has in mind.”

The purpose of this document is to emphasize to the Commission that the NLR network is an extremely robust, nationwide, fiber infrastructure that today primarily serves the research and education community but can readily be used to serve as the backbone of a public safety network. Although networks such as ARPANET, NSFnet and Internet2 have served a good and valuable purpose, the research and education community understood the importance of owning a network infrastructure, which resulted in the creation of NLR to provide a national backbone link to the RONs with advanced broadband capabilities and capacity. As a result, NLR and each RON have the ability to meet the middle mile and backbone needs of the public safety agency community through a uniquely robust and secure broadband network.

The foundation of the NLR infrastructure is a dense wave division multiplexed optical footprint consisting of roughly 12,000 route miles of dedicated fiber with a maximum capacity of up to 40 wavelengths. Although each wavelength can support transmissions of up to 10 Gbps, NLR is in the process of upgrading the network to eventually support transmissions of up to 100 Gbps per wavelength.

The Commission should take full advantage of the advanced network infrastructure that has been deployed by NLR across the nation. The rationale for doing so is as simple as it is compelling: NLR’s network is already in place and ready to be used and NLR possesses the leadership, knowledge and expertise to operate and maintain that infrastructure as the backbone of a nationwide, broadband, interoperable public safety network envisioned by the Commission.



Figure 1

# National LambdaRail

[www.nlr.net](http://www.nlr.net)

America's Vision. America's Network.



NLR's nationwide advanced optical network infrastructure is capable of meeting the needs of the most demanding scientific, research, health, education, public information, public safety and economic development goals of the U.S. Because NLR owns the underlying fiber optic cable and optical equipment, as well as other networking equipment, it can cost-effectively implement multiple, diverse experimental and production networks on its nationwide optical fiber footprint with unprecedented flexibility and responsiveness.

**Table 1**

**Regional Optical Networks**

RONs Connected to NLR

CENIC  
FLR  
FRGP  
LEARN  
MATP/MAX  
NCREN  
NeLR  
NMLR  
ONECOMMUNITY  
ONENET/ARKANSAS NET  
ORNLFUTURENET  
PNWGP  
  
PSC/3ROX  
SLR

States Served by the Connected RONs

California, Nevada, Arizona  
Florida  
Colorado, Utah, Wyoming, Idaho  
Texas  
Virginia, Maryland and DC  
North Carolina  
New York, Massachusetts  
New Mexico  
Northeast Ohio  
Oklahoma, Arkansas  
Atlanta to Chicago  
Washington, Oregon, Hawaii, Alaska, Montana,  
Idaho  
Western Pennsylvania, West Virginia  
Georgia, Alabama, Tennessee, Kentucky

Other Available Connections

BOREAS  
CONNECTICUT NET  
GPN  
ILIGHT  
IRON  
LONI  
MAGPI  
MERIT  
MORENET  
MREN  
NEVADA NET  
NORTHERN TIER  
NOX  
NYSERNet  
OARNET  
OMNIPOP  
OSHEAN  
WISCNET

States Served by the Other Available Connections

Wisconsin, Minnesota, Iowa  
Connecticut  
Nebraska, Kansas, Iowa, Missouri  
Indiana  
Idaho, Eastern Washington  
Louisiana, Mississippi  
Eastern Pennsylvania, Delaware, New Jersey  
Michigan  
Missouri  
Illinois  
Nevada  
North Dakota, South Dakota, Montana, Idaho  
Massachusetts, Vermont, New Hampshire, Maine  
New York  
Ohio  
Big 10 Universities  
Rhode Island  
Wisconsin